

Math (Science)	Group-II	Paper-I
Time: 20 Minutes	(Objective Type)	Max Marks: 15

**Note:** Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

1-1- Order of transpose of  $\begin{bmatrix} 2 & 1 \\ 0 & 1 \\ 3 & 2 \end{bmatrix}$  is:

- (a) 3 – by – 2 ✓ (b) 1 – by – 2  
(c) 2 – by – 1 (d) 2 – by – 3

2- Every real number is:

- (a) A positive integer  
(b) A rational number  
(c) A negative integer  
(d) A complex number ✓

3-  $\log e = \text{----}$ , where ( $e \approx 2.718$ ):

- (a) 0 (b) 0.4343 ✓  
(c)  $\infty$  (d) 1

4- Conjugate of surd  $a + \sqrt{b}$  is -----:

- (a)  $-a + \sqrt{b}$  (b)  $a - \sqrt{b}$  ✓  
(c)  $\sqrt{a} + \sqrt{b}$  (d)  $\sqrt{a} - \sqrt{b}$

5- Find 'm' so that  $x^2 + 4x + m$  is a complete square:

- (a) 8 (b) -8  
(c) 4 ✓ (d) 16

6- The square root of  $a^2 - 2a + 1$  is ----:

- (a)  $\pm (a + 1)$  (b)  $\pm (a - 1)$  ✓  
(c)  $a - 1$  (d)  $a + 1$

- 7- If  $x$  is no larger than 10, then ---- :
- (a)  $x \geq 8$  (b)  $x \leq 10$  ✓  
(c)  $x < 10$  (d)  $x > 10$
- 8- Point  $(2, -3)$  lies in quadrant:
- (a) I (b) II  
(c) III (d) IV ✓
- 9- Mid-point of the points  $(0, 0)$  and  $(2, 2)$  is:
- (a)  $(1, 1)$  ✓ (b)  $(1, 0)$   
(c)  $(0, 1)$  (d)  $(-1, -1)$
- 10- Notation used for congruent is:
- (a)  $\perp$  (b)  $=$   
(c)  $\cong$  ✓ (d)  $\sim$
- 11- Notation  $\parallel$  means:
- (a) Congruent (b) Equal  
(c) Parallel ✓ (d) Un-equal
- 12- Bisection means to divide into equal parts:
- (a) 1 (b) 3  
(c) 4 (d) 2 ✓
- 13- The unit of ratio is:
- (a) kg (b) m  
(c) cm (d) None of these ✓
- 14- A ray has ---- end points:
- (a) 2 (b) 1 ✓  
(c) 3 (d) 4
- 15- The right bisectors of the three sides of a triangle are ----- :
- (a) Congruent (b) Collinear  
(c) Concurrent ✓ (d) Parallel